



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/723,341

11/26/2003

Hongjie Cao

SPG6613PDUC

8212

27624

7590

01/08/2009

AKZO NOBEL INC.

LEGAL & IP

120 WHITE PLAINS ROAD, SUITE 300

TARRYTOWN, NY 10591

EXAMINER

CHANNAVAJJALA, LAKSHMI SARADA

ART UNIT

PAPER NUMBER

1611

MAIL DATE

DELIVERY MODE

01/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/723,341	Applicant(s) CAO ET AL.	
	Examiner Lakshmi S. Channavajjala	Art Unit 1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 16 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,8-10,26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8-10,26 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt of amendment and response dated 10-16-08 is acknowledged.

Claims 1-2, 8-10 and 26-27 are pending.

Claims 3-7 and 11-25 are canceled.

In response to the amendment, the following new rejection has been applied to the pending claims:

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-2, 8-10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4085264 to Seib et al (Seib).

Seib teaches copolymers of acrylic acid, methacrylic acid and methacrylic acid esters and their use in hair care composition. The acrylate polymers of the copolymer are described as follows:

Art Unit: 1611

ing effect, can be combed out without difficulty.

We have found, surprisingly, that this object is achieved by the process according to the invention, ie. in a process for the manufacture of copolymers by copolymerizing acrylic acid or methacrylic acid with 4 esters of acrylic acid and methacrylic acid in the presence of free radical-forming initiators, wherein the improvement comprises copolymerizing — based on total weight of monomers

(a) from 45 to 80% of methyl methacrylate, 5

(b) from 10 to 30% of one or more alkyl acrylates where alkyl is of 3 to 12 carbon atoms and

(c) from 10 to 25% of acrylic acid and/or methacrylic acid at from 140° to 300° C and at from 2 to 50 bars.

In particular, Seib teaches butylacrylate as one of the copolymer (see col. 2, L 1) and the various amounts of the individual polymers that make up the copolymers are described in examples 1-3 polymers in col.3, L 5-42. Instant claims are now amended to recite wherein the acrylate copolymer comprises from about 38% to about 48% butyl acrylate, from about 39% to about 49% methyl methacrylate, and from about 8% to about 18% methacrylic acid, by weight of the copolymer. Seib fails to teach the exact percentages of the claimed polymers, particular with respect to butyl acrylate. Seib teaches 45-80% methyl methacrylate and 10-25% methacrylic acid, which overlap with instant percentage of methyl methacrylate and acrylic acid respectively. Seib teaches lower amounts of butyl acrylate i.e., 10-30% whereas instant claim recites 38% to 48%. However, Seib does discuss prior art copolymers with equal amounts of methacrylic acid ester and methyl methacrylate (col. 1, L 55-62, German published application DAS 2,161,909).

Art Unit: 1611

Seib also states that while prior art copolymers with higher than 40% of methyl methacrylate and methacrylic acid esters were thought to be alcohol-insoluble and not good for film forming properties, it was discovered that such high amounts can still yield alcohol solubility and also excellent film forming properties. According to Seib the polymers are not completely neutralized and low degree of neutralization is advantageous for less tackiness of hair (col. 5, L 15-20). Therefore, a skilled artisan would be able to optimize the amounts of individual amounts of the polymers, particularly butyl acrylate, in the copolymers of Seib with an expectation to obtain the desired solubility in alcohol and excellent film forming property. With respect to the limitations of suncare and skin care composition of claims 8 and 10, the compositions of Seib are taught for hair, however, the claims do not recite any other components other than the polymer that is also taught by Seib and therefore the composition of Seib also meets the claimed suncare and skin care limitations, which represent future intended use. Additionally, a hair care composition can simultaneously function as a sun care composition because claims 8 and 26 recite same components of the composition and yet for sun care and eye lashes or eyebrows.

3. Claims 1-2, 8-10 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6221389 to Cannell et al in view of US 4085264 to Seib et al (Seib).

Art Unit: 1611

4. Instant new claim 27 is also included under this section for reasons provided below.

Cannell teaches a hair care composition comprising an aqueous carrier and water insoluble materials (abstract, col. 3, L 25+). The composition is useful for hair, skin or eyelashes etc. For the water insoluble polymers, Cannell teaches that the polymers are unneutralized or partially neutralized (col. 7, Lines 33-40) and suggests specific polymers such as Luvimer 36D (col. 8, L 33-35), more particularly made of the monomers recited in claim 1. Cannell shows good hair curling and fixing properties with unneutralized polymers as well as partially neutralized polymer. Example 22 of Cannell is directed to a mascara composition, the preparation of which employs reads on an emulsion. Cannell is silent with respect to the claimed percentages of the individual monomers of the polymer.

Seib teaches the claimed copolymers, as described in the previous paragraph, for hair care composition as a film forming polymer. It would have been obvious for one of an ordinary skill in the art at the time of the instant invention was made to include polymers such as those described by Seib in the composition of Cannell because Seib teaches acrylic and acrylic acid esters copolymers similar to Cannell, for their excellent film forming and hair combing properties and Cannell also teaches the polymers for their hair styling, fixing or other non-styling effects. With respect to the exact percentages of butyl acrylate in the copolymer

Art Unit: 1611

of Seib, applicants have not provided any unexpected advantages with the specific percentage of butyl acrylate claimed.

Response to Arguments

5. Applicant's arguments filed 10-16-08 have been fully considered but they are not persuasive.

6. It is argued that **Seib** does not anticipate instant claimed percentages of monomers. However, instant rejection is now under 35 USC 103(a) over the teachings of Seib. With respect to the limitations of suncare, as explained above, a hair care composition can also function as a suncare simultaneously, unless otherwise shown. This is further supported by instant claim 26, which is not different from sun care composition of claim 8.

Appellants argue that **Cannell** discloses aqueous carrier systems based on organic phospholipids capable of forming bilayers in aqueous solutions, nonionic surfactants, and amphoteric surfactants, wherein the carrier systems allow water-insoluble polymers to be incorporated into aqueous solutions (col. 1, lines 12-18). It is argued that the compositions of Cannell include at least one organic phospholipid, at least one amphoteric surfactant and at least one nonionic surfactant (col. 2, lines 50-56) and water-insoluble ingredient is dissolved in a solution of the phospholipid, amphoteric surfactant and nonionic surfactant to form the aqueous carrier system and this system is then formulated in a personal care composition (col. 7, lines 1-11; col. 9, lines 10-45;

Art Unit: 1611

col. 10, lines 1-11). It is argued that Cannell solubilizes the polymers first before using the composition. However, instant claims do not exclude the other components that solubilize the polymers because of instant "comprising" language and the term "water-dispersible" only implies the property of the polymers. Hence the argument is not persuasive.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S. Channavajjala whose telephone number is 571-272-0591. The examiner can normally be reached on 9.00 AM -5.30 PM.

Art Unit: 1611

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila G. Landau can be reached on 571-272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lakshmi S Channavajjala/
Primary Examiner, Art Unit 1611
January 4, 2009